URBANA, ILLINOIS
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Maize Genetics Stock Center 2014 allele test results.

--Stinard, PS

We report here the results of tests of allelism of various mutants from the Maize Genetic Stock Center's collection. In the case of the new *y1*, *y8*, and *te1* alleles, allele tests were conducted on mutants in our "phenotype only" collection that were observed to have similar phenotypes to the reference alleles of these named mutants. In the case of the new *v30* and *w1* alleles, named mutants were allele tested against the reference alleles of mutants that map to the same vicinity on their respective chromosomes. Precedence was given to the names of the loci that were named and characterized first historically. In the case of the new *lw1*, *lw2*, *vp9*, and *y10* alleles, white endosperm/albino seedling mutants isolated from UniformMu stocks that contain *Mutator* inserts in gene models predicted to be associated with these loci due to their map location (Stinard, PS. 2013. Data-mining the B73 genome sequence for carotenoid biosynthesis gene candidates. MNL 86:29-31) were tested against the mutant reference alleles for these loci. The mutants that gave positive tests of allelism are presented in Table 1.

It should be noted that in the case of the positive allele test between *w1* and *l3*, the *l3* allele used in the test was not the original one described by Jenkins and Bell (Jenkins, MT and Bell, MA. 1930. Genetics 15:253-282), but was rather an allele obtained from HC Eyster that the Stock Center had tested against the *l3* reference allele in the 1950s and found to be allelic. The *l3* reference allele was subsequently discarded by the Stock Center and replaced with the Eyster allele. This is of note because according to pedigree records, the Eyster *l3* allele was isolated from a *w1* stock. Perhaps Eyster was actually observing the interaction of *w1* with *l1*, which produces a luteus yellow seedling phenotype, rather than a new mutant. If that is the case, then the Eyster *l3* allele is actually the *w1* reference allele in an *l1* background, hence the positive allele test that we obtained with *w1*.

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Table 1. Results of allele tests of mutants at the Maize Genetics Stock Center.

Former mutant designation	New allelic designation
y*-73-324-1	y1-73-324-1
pale y*-85-3036-38	y1-85-3036-38
y*-84-5272-12	y1-84-5272-12
y*-84-5288-1	y1-84-5288-1
y*-85-3087-12	y1-85-3087-12
y*-1979-46	y8-1979-46
y*-Funk-81-2	y8-Funk-81-2
y*-Funk-81-9	y8- Funk-81-9
y*-Funk-81-12	y8- Funk-81-12
y*-1981-18	y8-1981-18
d*-N208B	te1-N208B
lw*- UFMu-06469	lw1-UFMu-06469
lw*- UFMu-07766	lw2-UFMu-07766
vp*- UFMu-03973	vp9-UFMu-03973
lw*- UFMu-06289	y10-UFMu-06289
clpp1-vyl	v30-vyl
l3-Eyster	w1-l3-Eyster

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